EW180

EW180, HELIAX® Standard Elliptical Waveguide, 17.3–19.7 GHz, black PE jacket

Product Classification

Product Type	Standard elliptical waveguide
Product Brand	HELIAX®
Product Series	Standard

General Specifications

Jacket Color	Black
Performance Note	Values typical, unless otherwise stated

Dimensions

Diameter Over Jacket (E Plane)	20.1 mm | 0.791 in
Diameter Over Jacket (H Plane)	12.4 mm | 0.488 in
Cable Volume	111 L/km | 1.195 ft³/kft

Electrical Specifications

eTE11 Mode Cutoff	11.15 GHz
Group Delay at Frequency	127 ns/100 ft @ 18.700 GHz | 416 ns/100 m @ 18.700 GHz
Operating Frequency Band	17.7 − 19.7 GHz

VSWR/Return Loss

Frequency Band	VSWR	Return Loss (dB)
17.7−19.7 GHz	1.15	23.13

Attenuation

Frequency (GHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)	Group Velocity %
17.7	20.111	6.13	0.537	77.7

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18.1	19.799	6.035	0.546	78.8
18.5	19.523	5.951	0.553	79.8
18.9	19.278	5.876	0.56	80.7
19.3	19.06	5.81	0.567	81.6
19.7	18.865	5.75	0.573	82.4

Material Specifications

Conductor Material	Corrugated copper
Jacket Material	PE

Mechanical Specifications

Minimum Bend Radius, Multiple Bends (E Plane)	150 mm | 5.906 in
Minimum Bend Radius, Multiple Bends (H Plane)	380 mm | 14.961 in
Minimum Bend Radius, Single Bend (E Plane)	150 mm | 5.906 in
Minimum Bend Radius, Single Bend (H Plane)	380 mm | 14.961 in
Maximum Twist	6.562 °/m | 2 °/ft

Environmental Specifications

Installation temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +85 °C (-94 °F to +185 °F)
Attenuation, Ambient Temperature	75 °F | 23.889 °C
Average Power, Ambient Temperature	104 °F | 40 °C
Average Power, Temperature Rise	42 °C | 107.6 °F

Packaging and Weights

Cable weight	0.22 kg/m | 0.148 lb/ft

Regulatory Compliance/Certifications

Agency	**Classification**
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

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